

FLAVONOIDS OF DATISCA CANNABINA

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Datisca cannabina L. is a perennial herbaceous plant of the family Datisceae growing in the Caucasus and in Central Asia. It has been long used in folk medicine and as a dye for fabric.

We have studied the bark of the roots collected in the fruit-bearing phase (Zestafoni region, Georgian SSR). The total flavonoids, extracted with methanol, were separated on a polyamide column. This gave seven individual flavonoids. By comparing the physicochemical constants of the substances isolated and their derivatives with those given in the literature, the following compounds were identified: datiscetin (3, 5, 7, 2'-tetrahydroxyflavone), galangin (3, 5, 7-trihydroxyflavone), and izalpinin (3, 5-dihydroxy-7-methoxy-flavone) and their 3-rutinosides. In addition a chalcone with mp $>350^{\circ}$ C, the identification of which is not yet complete, was isolated. The 3-rutinoside of izalpinin, with the composition $C_{28}H_{32}O_{14}$, mp $232-233^{\circ}$ C, is a new substance and we have named it cannabin.

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FLAVONOIDS OF THE FLOWERS OF RHODODENDRON SCHLIPPENBACHII

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We extracted the flowers of *Rh. Schlippenbachii* Maxim. successively with chloroform and a mixture of ethanol and methanol (1:2). The alcoholic fraction was evaporated under vacuum, diluted with water, and treated with ethyl acetate. After the ethyl acetate had been distilled off, the combined flavonoids were precipitated with a fivefold volume of chloroform.

On two-dimensional paper chromatography in the systems 1) 15% acetic acid and 2) butan-1-ol-acetic acid-water (4:1:5) with the subsequent use of qualitative reactions, it was found that the flowers contain three compounds of the flavonol type. Acid hydrolysis of the combined flavonoids showed that they contained a single aglycone, which was identified from the results of physicochemical analysis as quercetin, and three sugar components: D-galactose, L-arabinose, and L-rhamnose. The combined flavonoids were separated by fractional recrystallization from ethanol and were purified on a Kapron column [1].

A substance with the composition $C_{21}H_{20}O_{12}$ is a monoglycoside. By the UV spectroscopy of the substance in the presence of ionizing and complex-forming additives the presence of free hydroxy groups in positions 3', 4', 5, and 7 was found. On acid hydrolysis, quercetin and D-galactose were obtained. From the results of enzymatic hydrolysis and the $[\alpha]_D$ and $[M]_D$ values of the glycoside, and also from a comparison of these values with the corresponding constants of cuprammonium complexes [2, 3], it was established that the D-galactose is attached to the aglycone by a β -glycosidic linkage and has the form of β -D-galactopyranose. On this basis, the substance $C_{21}H_{20}O_{12}$ was identified as hyperoside (quercetin 3-O- β -D-galactopyranoside).

A substance with the composition $C_{20}H_{18}O_{11}$ with mp $208-211^{\circ}$ C is also a 3-O-glycoside of quercetin. The sugar component is L-arabinose, which is attached to the aglycone by a β -glycosidic link.

A study of the UV and IR spectra and the products of acid and enzymatic hydrolysis and of alkaline fusion showed that the second substance is quercetin 3-O- α -L-arabofuranoside.

The nature of the third glycoside is being studied.

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